

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:

Assistant Commissioner for Patents
Washington, D.C. 20231



On February 25, 2002

TOWNSEND and TOWNSEND and CREW LLP

By: Don Mize

PATENT
Attorney Docket No.: 019186-002910US

#4 BT
03-2002

2153

RECEIVED

MAR 05 2002

Technology Center 2100

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

HORN, et al.

Application No.: 09/768,843

Filed: January 23, 2001

For: METHODS AND APPARATUS
FOR SCHEDULING, SERVING,
RECEIVING MEDIA-ON-DEMAND
FOR CLIENTS, SERVERS ARRANGED
ACCORDING TO CONSTRAINTS ON
RESOURCES

Examiner:

Art Unit:

INFORMATION DISCLOSURE
STATEMENT UNDER 37 CFR §1.97 and
§1.98

Assistant Commissioner for Patents
Washington, D.C. 20231

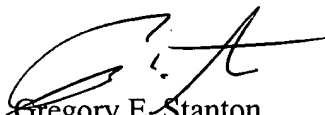
Sir:

The references cited on attached form PTO/SB/08A and PTO/SB/08B are being called to the attention of the Examiner. Copies of the references are enclosed. It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

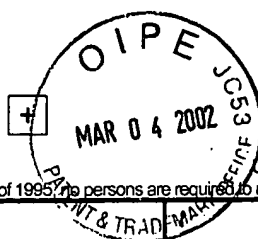
Applicant believes that no fee is required for submission of this statement, since it is being submitted prior to the first Office Action. However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,


Gregory E. Stanton
Reg. No. 45,127

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, 8th Floor
San Francisco, California 94111-3834
Tel: 415-576-0200
Fax: 415-576-0300
GES/dxm

Please type a plus sign (+) inside this box



PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet **1** of **3**

Complete if Known

Application Number	09/768,843
Filing Date	January 23, 2001
First Named Inventor	Horn, Gavin
Group Art Unit	
Examiner Name	
Attorney Docket Number	019186-002910US

RECEIVED
MAR 05 2002
Technology Center 2100

U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
	1.	6,307,487		Luby	10/23/2001	
	2.	6,320,520		Luby	11/20/2001	
	3.	5,617,541		Albanese, et al.	04/01/1997	
	4.	6,073,250		Luby, et al.	06/06/2000	
	5.	6,081,909		Luby, et al.	06/27/2000	
	6.	6,163,870		Luby, et al.	12/19/2000	
	7.	6,195,777		Luby, et al.	02/27/2001	
	8.	6,018,359		Kermode, et al.	01/25/2000	
	9.	5,371,532		Gelman, et al.	12/06/1994	
	10.	5,936,659		Viswanathan, et al.	08/10/1999	
	11.	5,379,297		Glover, et al.	01/03/1995	
	12.	5,903,775		Murray	05/11/1999	
	13.	5,659,614		Bailey, III	08/19/1997	
	14.	6,011,590		Saukkonen	01/04/2000	
	15.	6,141,053		Saukkonen	10/31/2000	
	16.	5,751,336		Aggarwal, et al.	05/12/98	
	17.	6,185,265		Campanella	02/06/01	
	18.	5,936,949		Pasternak, et al.	08/10/99	
	19.	5,835,165		Keale, et al.	11/10/98	

FOREIGN PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴	Kind Code ⁵ (if known)				
	20.	WIPO	WO 01/58130	A2	Rajwan	08/09/2001		
	21.	WIPO	WO 01/58131	A2	Yosef, et al.	08/09/2001		
	22.	WIPO	WO 01/57667	A1	Rajwan, et al.	08/09/2001		

Examiner
Signature

Date
Considered

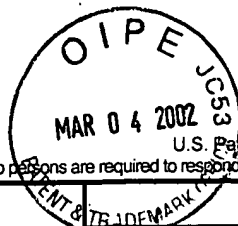
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

SF 1314159 v1

Please type a plus sign (+) inside this box →



PTO/SB/08B (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet **2** of **3**

Complete if Known

Application Number	09/768,843
Filing Date	January 23, 2001
First Named Inventor	Horn, Gavin
Group Art Unit	
Examiner Name	
Attorney Docket Number	019186-002910US

Technology Center 2100

MAR 05 2002

RECEIVED

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	23.	Wong, J. W., "Broadcast delivery", <i>Proceedings of the IEEE</i> , 76 (12):1566-1577, (1988)	
	24.	Viswanathan, et al., "Metropolitan area video-on-demand services using pyramid broadcasting", <i>Multimedia Systems</i> , 4 (4):197-208 (1996)	
	25.	Aggarwal, et al., "On optimal batching policies for video-on-demand storage servers", <i>Proc. Intl. Conf. on Multimedia Computing and Systems</i> , pp. 253-258, Hiroshima, Japan, (1996)	
	26.	Almeroth, et al., "The use of multicast delivery to provide a scalable and interactive video-on-demand service", <i>IEEE Journal on Selected Areas in Communication</i> , 14 (6):1110-1122, (1996)	
	27.	Dan, et al., "Scheduling policies for an on-demand video server with batching", <i>Proc. ACM Multimedia</i> , pp. 391-398 (1998)	
	28.	Bar-Noy, et al., "Competitive on-line stream merging algorithms for media-on-demand", Draft (July 2000)	
	29.	Bar-Noy, et al., "Efficient algorithms for optimal stream merging for media-on-demand", Draft (August 2000)	
	30.	Eager, et al., "Minimizing bandwidth requirements for on-demand data delivery", <i>Proc. Intl. Workshop on Advances in Multimedia Information Systems</i> , pages 80-87, (Indian Wells, CA, October 1999)	
	31.	Eager, et al., "Optimal and efficient merging schedules for video-on-demand servers", <i>Proc. ACM Multimedia</i> , vol. 7, pages 199-203 (1999)	
	32.	Aggarwal, et al., "A permutation-based pyramid broadcasting scheme for video-on-demand systems", <i>Proc. IEEE Intl' Conf. on Multimedia Systems</i> , (Hiroshima, Japan, June 1996)	
	33.	Hua, et al., "Skyscraper broadcasting: A new broadcasting system for metropolitan video-on-demand systems", <i>Proc. ACM SIGCOMM</i> , pp. 89-100 (Cannes, France, 1997)	
	34.	Gao, et al., "Efficient schemes for broadcasting popular videos", <i>Proc. Inter. Workshop on Network and Operating System Support for Digital Audio and Video</i> , (July 1998)	
	35.	Juhn, et al., "Harmonic broadcasting for video-on-demand service", <i>IEEE Trans. on Broadcasting</i> , 43 :268-271 (1997)	
	36.	Juhn, et al., "Adaptive fast data broadcasting scheme for video-on-demand service", <i>IEEE Trans. on Broadcasting</i> , 44 :182-185 (1998)	
	37.	Paris, et al., "Efficient broadcasting protocols for video on demand", <i>International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS)</i> , vol. 6, pages 127-132 (July 1998)	

Examiner
Signature

Date
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

SF 1314159 v1

Please type a plus sign (+) inside this box → ☐

MAR 04 2002

PTO/SB/08B (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet **3** of **3**

Complete if Known

Application Number	09/768,843
Filing Date	January 23, 2001
First Named Inventor	Horn, Gavin
Group Art Unit	
Examiner Name	
Attorney Docket Number	019186-002910US

Technology Center 2100
MAR 03 2002

RECEIVED

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	38.	Paris, et al., "A low bandwidth broadcasting protocol for video on demand", <i>Proc. International Conference on Computer Communications and Networks</i> , vol. 7, pages 690-697 (October 1998)	
	39.	Sincoskie, W. D., "System Architecture for Large Scale Video on Demand Service," <i>Computer Network and ISDN Systems</i> , pp. 155-162, (1991)	
	40.	Rangan, et al., "Designing an On-Demand Multimedia Service," <i>IEEE Communication Magazine</i> , Vol. 30, pp 5-65, (July 1992)	
	41.	Ozden, et al, "A Low-cost Storage Service for Movie on Demand Databases," <i>Proceedings of the 20th Very Large DataBases (VLDB) Conference</i> (Santiago, Chile 1994)	
	42.	Viswanathan, et al., "Pyramid Broadcasting for Video-on-Demand Service", <i>Proceedings of the SPIE Multimedia Computing and Networking Conference</i> , Vol. 2417, pp. 66-77 (San Jose, CA, February 1995)	
	43.	Viswanathan, S. R., "Publishing in Wireless and Wireline Environments", Ph.D. Thesis, Rutgers, The State University of New Jersey (November 1994)	

Examiner
Signature

Date
Considered

¹ EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

² Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.
SF 1314159 v1